



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket Nos. 71369.362 and PFI-010CN)

In re Application of: Gabel et al.) Examiner: To Be Assigned
Serial No. 10/698,868) Group Art Unit: To Be Assigned
Filing Date: October 31, 2003)

For: P2X7 RECEPTOR-DEFICIENT NON-HUMAN ANIMALS AND USES THEREOF

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date below.

Date: 1/29/04

Sarah Farris
Sarah Farris

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

Dear Sir:

Enclosed herewith for filing in the above-identified patent application are the following documents:

1. Information Disclosure Statement (2 pages);
2. Form PTO-1449 (3 Pages) Copied From Parent Application (09/875,318);
3. Form PTO-892 (1 Page) Copied From Parent Application (09/875,318);
4. Certificate of First Class Mailing; and
5. Return Postcard.

No fees are believed to be due in connection with this submission. However, please charge any fees that might be due or credit any overpayment to our Deposit Account No. 08-0219.

If there are any questions, please call the undersigned at the number below.

Respectfully submitted,

Date: 1/29/04
HALE AND DORR LLP
60 State Street
Boston, MA 02109
(617) 526-6000
(617) 526-5000 (Facsimile)

Ann-Louise Kerner
Ann-Louise Kerner, Ph.D.
Reg. No. 33,523
Attorney/Agent for Applicants



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Attorney Docket Nos. 71369.362 and PFI-010CN)

In re Application of: Gabel et al.) Examiner: To Be Assigned
Serial No. 10/698,868) Group Art Unit: To Be Assigned
Filing Date: October 31, 2003)

For: P2X7 RECEPTOR-DEFICIENT NON-HUMAN ANIMALS AND USES THEREOF

CERTIFICATE OF FIRST CLASS MAILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date below.

Date: 1/29/04

Sarah Farris

Sarah Farris

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

Pursuant to 37 C.F.R., Applicants submit herewith the attached Form PTO-1449 and Form PTO-892 for filing in the above-referenced application. The present application is a continuation of U.S. Patent Application No. 09/875,318. The Form PTO-1449 and the Form PTO-892 list references that were already submitted by the Applicants and the Examiner during the prosecution of the parent application. Therefore, pursuant to 37 C.F.R. § 1.98 (d), no copies of the previously cited art are enclosed. This Information Disclosure Statement is being filed under 37 C.F.R. § 1.97 (b) before the mailing date of the first Office Action, therefore no fee is believed to be due.

This submission does not represent that a search has been made and does not constitute an admission that the listed documents are material to the patentability of the invention, or that the listed documents are prior art. Applicants reserve the right to take appropriate action to establish the patentability of the disclosed invention over the listed documents, should one or more of the documents be applied against the claims of the present application. If it should be determined that any of the listed documents constitute prior art under United States law, Applicants reserve the right to present to the Office relevant facts and law regarding the significance of such documents to the patentability of the claimed invention.

U.S. Patent Application No. 10/698,868
Information Disclosure Statement
Page Two

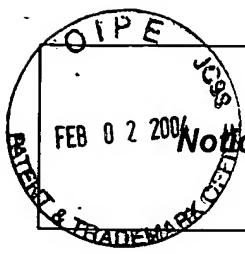
It is respectfully requested that the Examiner initial and return copies of the enclosed form PTO-1449 with the next Patent Office communication.

Please also charge any fees that might be due in connection with this matter to Deposit Account No. 08-0219. If there are any questions, please call the undersigned at the telephone number indicated below.

Respectfully submitted,

Date: 1/29/04
HALE AND DORR LLP
60 State Street
Boston, MA 02109
(617) 526-6000
(617) 526-5000 (Facsimile)

Ann-Louise Kerner
Ann-Louise Kerner, Ph.D.
Reg. No. 33,523
Attorney/Agent for Applicants



Notice of References Cited

Application/Control No. 09/875,318		Applicant(s)/Patent Under Reexamination GABEL ET AL.	
Examiner Thaia N. Ton		Art Unit 1632	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

COPY

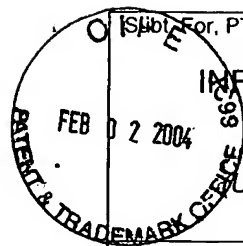
FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Mullins et.al.; Perspectives Series: Molecular Medicine in Genetically Engineered Animals, 1996, J. Clin. Invest., Vol. 97, No. 7: 1557-1560.
	V	Moreadith et.al.; Gene targeting in embryonic stem cells: the new physiology and metabolism, 1997, J. Mol. Med. 75: 208-216.
	W	Capecchi; YTargeted Gene Replacement, 1994, Scientific American: 34-41.
	X	Chessell et.al.; Cloning and functional characterisation of the mouse P2X receptor; 1998, FEBS 439: 26-30.

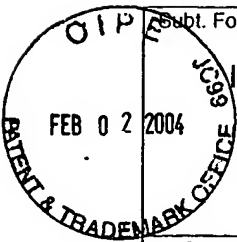
*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)				Docket Number 71369.186 and PFI-010US	Application Number 09/875,318
Sheet 2 OF 3				COPY Gabel et al.	
				Filing Date June 6, 2001	Group Art Unit TBA

B1	Sanz JM and Di Virgilio F "Kinetics and mechanism of ATP-dependent IL-1 beta release from microglial cells" J Immunol. 2000 May 1;164(9):4893-8.
B2	Mutini C et al., "Mouse dendritic cells express the P2X7 purinergic receptor: characterization and possible participation in antigen presentation" J Immunol. 1999 Aug 15;163(4):1958-65.
B3	Baricordi OR et al., "Increased proliferation rate of lymphoid cells transfected with the P2X(7) ATP receptor" J Biol Chem. 1999 Nov 19;274(47):33206-8.
B4	Chiozzi P "Spontaneous cell fusion in macrophage cultures expressing high levels of the P2Z/P2X7 receptor" J Cell Biol. 1997 Aug 11;138(3):697-706.
B5	Virginio C et al., "Kinetics of cell lysis, dye uptake and permeability changes in cells expressing the rat P2X7 receptor" J Physiol. 1999 Sep 1;519 Pt 2:335-46.
B6	Ferrari D et al., "P2Z purinoreceptor ligation induces activation of caspases with distinct roles in apoptotic and necrotic alterations of cell death" FEBS Lett. 1999 Mar 19;447(1):71-5.
B7	Sanz JM and Di Virgilio F "Kinetics and mechanism of ATP-dependent IL-1 beta release from microglial cells" J Immunol. 2000 May 1;164(9):4893-8.
B8	Rassendren F et al., "The permeabilizing ATP receptor, P2X7. Cloning and expression of a human cDNA" Biol Chem. 1997 Feb 28;272(9):5482-6.
B9	Collo Get al., "Tissue distribution of the P2X7 receptor" Neuropharmacology. 1997 Sep;36(9):1277-83.
B10	Michel AD et al., "Identification and characterization of an endogenous P2X7 (P2Z) receptor in CHO-K1 cells" Br J Pharmacol. 1998 Nov;125(6):1194-201.
B11	Steinberg TH et al., "ATP4- permeabilizes the plasma membrane of mouse macrophages to fluorescent dyes" J Biol Chem. 1987 Jun 25;262(18):8884-8.
B12	Greenberg S et al., "Extracellular nucleotides mediate Ca2+ fluxes in J774 macrophages by two distinct mechanisms" J Biol Chem. 1988 Jul 25;263(21):10337-43.
B13	North RA "Families of ion channels with two hydrophobic segments" Curr Opin Cell Biol. 1996 Aug;8(4):474-83. Review.
B14	Di Virgilio F "The P2Z purinoceptor: an intriguing role in immunity, inflammation and cell death" Immunol Today. 1995 Nov;16(11):524-8. Review.
B15	Perregaux DG et al., "Tenidap and other anion transport inhibitors disrupt cytolytic T lymphocyte-mediated IL-1 beta post-translational processing" J Immunol. 1996 Jul 1;157(1):57-64.
B16	Walter P and Johnson AE "Signal sequence recognition and protein targeting to the endoplasmic reticulum membrane" Annu Rev Cell Biol. 1994;10:87-119. Review.
B17	Wiley JS and Dubyak GR "Extracellular adenosine triphosphate increases cation permeability of chronic lymphocytic leukemic lymphocytes" Blood. 1989 Apr;73(5):1316-23.
B18	Walev I et al., "Potassium-inhibited processing of IL-1 beta in human monocytes" EMBO J. 1995 Apr 18;14(8):1607-14.
B19	Perregaux D et al., "IL-1 beta maturation: evidence that mature cytokine formation can be induced specifically by nigericin" J Immunol. 1992 Aug 15;149(4):1294-303.
B20	March CJ et al., "Cloning, sequence and expression of two distinct human interleukin-1 complementary DNAs" Nature. 1985 Jun 20-26;315(6021):641-7.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	



Subt. For, PTO-1449

INFORMATION DISCLOSURE
IN AN APPLICATION

(Use several sheets if necessary)

Sheet

1

OF

3

Docket Number
71369.186 and
PFI-010USApplication Number
09/875,318Applicant
Gabel et al.

Filing Date

June 6, 2001

Group Art Unit

TBA

COPY

U.S. Patent Documents

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	6,133,434	10/17/2000	Buell et al.	536	23.5	

Foreign Patent Documents

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

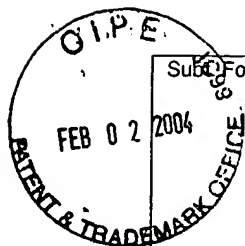
Other Documents (Including Author, Title, Date Pertinent Pages, Etc.)

A1	Sikora A et al., "Cutting edge: purinergic signaling regulates radical-mediated bacterial killing mechanisms in macrophages through a P2X7-independent mechanism" J Immunol. 1999 Jul 15;163(2):558-61.
A2	Guan Z et al., "Interleukin-1beta-induced cyclooxygenase-2 expression requires activation of both c-Jun NH2-terminal kinase and p38 MAPK signal pathways in rat renal mesangial cells" J Biol Chem. 1998 Oct 30;273(44):28670-6.
A3	Bhakdi S et al., "Effects of Escherichia coli hemolysin on human monocytes. Cytocidal action and stimulation of interleukin 1 release" J Clin Invest. 1990 Jun;85(6):1746-53.
A4	Humphreys BD and Dubyak GR "Induction of the P2z/P2X7 nucleotide receptor and associated phospholipase D activity by lipopolysaccharide and IFN-gamma in the human THP-1 monocytic cell line" J Immunol. 1996 Dec 15;157(12):5627-37.
A5	Lomedico PT et al., "Cloning and expression of murine interleukin-1 cDNA in Escherichia coli" Nature. 1984 Nov 29-Dec 5;312(5993):458-62.
A6	Bevilacqua MP et al., "Endothelial leukocyte adhesion molecule 1: an inducible receptor for neutrophils related to complement regulatory proteins and lectins" Science. 1989 Mar 3; 243(4895):1160-5.
A7	Griffiths RJ et al., "ATP induces the release of IL-1 from LPS-primed cells in vivo" J Immunol. 1995 Mar 15;154(6):2821-8.
A8	Miller DK et al., "Purification and characterization of active human interleukin-1 beta-converting enzyme from THP.1 monocytic cells" J Biol Chem. 1993 Aug 25;268(24):18062-9.
A9	Allen M et al., "Deficiency of the stress kinase p38alpha results in embryonic lethality: characterization of the kinase dependence of stress responses of enzyme-deficient embryonic stem cells" J Exp Med. 2000 Mar 6;191(5):859-70.
A10	Laliberte RE et al., "ATP treatment of human monocytes promotes caspase-1 maturation and externalization" J Biol Chem. 1999 Dec 24;274(52):36944-51.
A11	Ferrari D et al., "Extracellular ATP activates transcription factor NF-kappaB through the P2Z purinoreceptor by selectively targeting NF-kappaB p65" J Cell Biol. 1997 Dec 29;139(7): 1635-43.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.



Subj For, PTO-1449		Docket Number 71369.186 and PFI-010US	Application Number 09/875,318
INFORMATION DISCLOSURE IN AN APPLICATION (Use several sheets if necessary)		Applicant Gabel et al.	
		Filing Date June 6, 2001	Group Art Unit TBA
Sheet	3	OF	3

C1	Thornberry NA et al., "A novel heterodimeric cysteine protease is required for interleukin-1 beta processing in monocytes" Nature. 1992 Apr 30;356(6372):768-74.
C2	Hogquist KA et al., "Interleukin 1 is processed and released during apoptosis" Proc Natl Acad Sci U S A. 1991 Oct 1;88(19):8485-9.
C3	Foresta C et al., "Mechanism of human sperm activation by extracellular ATP" Am J Physiol. 1996 Jun;270(6 Pt 1):C1709-14.
C4	Flannery CR et al., "Effects of culture conditions and exposure to catabolic stimulators (IL-1 and retinoic acid) on the expression of matrix metalloproteinases (MMPs) and disintegrin metalloproteinases (ADAMs) by articular cartilage chondrocytes" Matrix Biol. 1999 Jun;18(3):225-37.
C5	Ayala JM et al., "IL-1 beta-converting enzyme is present in monocytic cells as an inactive 45-kDa precursor" J Immunol. 1994 Sep 15;153(6):2592-9.
C6	Gray PW et al., "Two interleukin 1 genes in the mouse: cloning and expression of the cDNA for murine interleukin 1 beta" J Immunol. 1986 Dec 1;137(11):3644-8.
C7	Slack J et al., "Independent binding of interleukin-1 alpha and interleukin-1 beta to type I and type II interleukin-1 receptors" J Biol Chem. 1993 Feb 5;268(4):2513-24.
C8	Lammas DA et al., "ATP-induced killing of mycobacteria by human macrophages is mediated by purinergic P2Z(P2X7) receptors" Immunity. 1997 Sep;7(3):433-44.
C9	Mosley B et al., "The interleukin-1 receptor binds the human interleukin-1 alpha precursor but not the interleukin-1 beta precursor" J Biol Chem. 1987 Mar 5;262(7):2941-4.
C10	Perregaux D and Gabel CA "Interleukin-1 beta maturation and release in response to ATP and nigericin" J Biol Chem. 1994 May 27;269(21):15195-203.
C11	Cerretti DP et al., "Molecular cloning of the interleukin-1 beta converting enzyme" Science. 1992 Apr 3;256(5053):97-100.
C12	McNiff PA et al., "Synovial fluid from rheumatoid arthritis patients contains sufficient levels of IL-1 beta and IL-6 to promote production of serum amyloid A by Hep3B cells" Cytokine. 1995 Feb;7(2):209-19.
C13	Murgia M et al., "Characterization of the cytotoxic effect of extracellular ATP in J774 mouse macrophages" Biochem J. 1992 Dec 15;288 (Pt 3):897-901.
C14	Surprenant A et al., "The cytolytic P2Z receptor for extracellular ATP identified as a P2X receptor (P2X7)" Science. 1996 May 3;272(5262):735-8.

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if citation is considered, whether or not citation is in conformance with MPEP § 609: Draw Line through citation if not conformance and not considered. Include copy with next communication to applicant.	